



Indiana State Department of Health

CCA-Treated Lumber

What is CCA?

- Chromated copper arsenate (CCA) is found in treated lumber that is commonly used to make outdoor products like playground equipment, garden beds, picnic tables, decks, patios and residential fencing.
- It is the bluish-green substance used to make pressure treated lumber, because it protects wood from deterioration from a variety of insects, fungi and organisms that cause rot.
- CCA is made out of three base chemicals: chromium, copper and arsenic. Of the three chemicals, chromium and arsenic are toxic to humans.

How can I reduce my family's exposure to CCA?

- Recent studies have shown that CCA chemicals can be released from treated lumber as a result of weathering (rain and snowfall) and significant residues can be left on the wood's surface.
- CCA residues can be easily removed (or wiped off) from the wood surface and picked up on the hands and clothing. Given the widespread use of CCA-treated wood, it is possible for a child to come in contact with CCA at home, at a playground and at school. Make it a habit to:
 - Wash children's hands once they are finished playing on structures made of CCA treated wood, and especially before eating.
 - Discourage children from putting their hands in their mouth or hand to mouth activity. CCA residues can be picked up on the hands and carried into the mouth.
 - Remove shoes after prolonged activity on structures made from CCA-treated lumber to keep from tracking any CCA residues inside.
 - Change a child's clothes as soon as possible after playing on CCA-treated wood products.
- CCA can also be released from treated wood by natural weathering including rain and snowfall. This can lead to contamination of the soils or other materials located directly adjacent and below structures made from CCA-treated lumber. Make it a habit to:
 - Keep children and pets out of areas directly beneath structures made from CCA-treated wood.
 - Do not grow edible plants near CCA-treated decks.
 - Insert a plastic liner between the soil and CCA-treated lumber used to make a garden bed.
- Certain coatings can substantially reduce the amount of removable and released CCA chemicals.
 - Reductions of 70 to 95 percent in removable/released arsenic were seen in all studies that subjected CCA-treated wood to natural weathering.
 - A particular coating has not been identified as clearly better or worse at reducing the loss of CCA chemicals from treated wood.
 - Studies show that polyurethane sealant can result in 70 to greater than 90 percent reduction in removable CCA chemicals. Oil-based sealant can provide similar results but may require more frequent application.
 - Apply a sealant to CCA-treated lumber structures once a year, although for some products once every two years may be adequate (for example, polyurethane may provide up to 95 percent reduction in removable and released CCA chemicals for as long as 2 years). The sealant selected should be colored to indicated wear.
- When using CCA-treated lumber to build an outdoor project, make it a habit to:
 - Wear a dust mask when cutting or sanding CCA-treated lumber.
 - Work over a drop cloth when cutting or sanding CCA-treated lumber so sawdust can be easily collected and disposed of in the trash.
 - Never burn CCA-treated lumber.
 - Not use CCA-treated lumber pieces for composting or mulch.
 - Always wash your hands and clothes after working with CCA-treated lumber.

How can CCA chemicals affect my family's health?

- We have no reliable information about whether arsenic and chromium affect children the same way as adults. The health effects information that we do have is based on known effects in adults or laboratory studies. Children who contact arsenic and chromium may have many of the same effects as adults, more serious or less serious health effects.
- **Arsenic** is a known human carcinogen that can be toxic to the skin and internal organs.
 - Health impacts may occur after many years of contact with arsenic.
 - Daily contact with arsenic leached from CCA-treated lumber may, under certain circumstances, lead to an increased risk for cancer or other long-term health effects.
 - Contact with arsenic may cause irritation of the stomach, intestines and skin, blood vessel damage, and reduced nerve function.
- **Chromium** is present in CCA-treated lumber in more than one form. One form is a known human carcinogen that can cause lung cancer and can be toxic to the skin and internal organs. It is currently not known which forms of chromium are released from CCA-treated lumber. To be more protective, one should assume the toxic form is present.
 - Long-term contact with chromium has caused lung cancer in workers who breathed chromium in the air at levels that were 100 to 1,000 times higher than the levels found in outdoor air.
 - Accidental or intentional swallowing of larger amounts of chromium has caused stomach upsets, ulcers, convulsions, kidney and liver damage.
 - The chromium in CCA is mixed with arsenic and it is not safe to eat.

Is there a medical test to determine whether I have been exposed to CCA?

There are tests that measure arsenic and chromium in the hair, urine, and blood. However, since a certain form of chromium is an essential nutrient, low levels of chromium are normally found in blood and urine. Call your local health department or your physician for more information about this test.

Where can I get more information?

The United States Environmental Protection Agency recently announced an industry-supported phase out of the production of CCA treated lumber for residential uses. New labeling requirements specifying no use of CCA will be allowed by the wood-treating industry for residential purposes will be in effect after December 31, 2003. More information on the CCA phase out is available at

www.epa.gov/pesticides/citizens/1file.htm, or by contacting IDEM or the Indiana State Department of Health at the phone numbers listed below.

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